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(54) **ULTRASONIC SENSOR AND ULTRASONIC FLOWMETER USING IT**

(57) Abstract:

PROBLEM TO BE SOLVED: To provide an oscillator capable of easily providing an ultrasonic sensor having a prescribed high impedance and a structure for the retaining member thereof.

SOLUTION: An oscillator 12 is adhered to the surface 11 of a cylindrical sensor-retaining member 10, which is opposed to the side surface 7 for carrying a fluid to be measured of a flowmeter body 1, to constitute an ultrasonic sensor. A spring 15 regularly presses the sensor retaining member 10 and the oscillator 12 to the side surface 7 of a sensor insertion part 6. A recessed part 111 having prescribed diameter and depth is provided in the center of the surface 11 for adhering the oscillator 12 of the sensor-retaining member 10 while leaving the peripheral part of the oscillator 12, and the oscillator 12 is adhered to the sensor-retaining member 10 through an adhesive 112 filled in the recessed part 111. Since the oscillator 12 is not directly closely fitted to the sensor-retaining

member 10 but adhered through the adhesive 112 having a prescribed thickness, the ultrasonic sensor can have a high impedance and generate a high receiving output.

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